

SEQUENCE LISTING

(1) GENERAL INFORMATION:

(i) APPLICANT:

- (A) NAME: Institut fuer Pflanzengenetik und Kulturpflanzenforschung
- (B) STREET: Corrensstr. 3
- (C) CITY: Gatersleben
- (D) STATE: Sachsen-Anhalt
- (E) COUNTRY: Deutschland
- (F) POSTAL CODE (ZIP): D-06466

(ii) TITLE OF INVENTION: Microsatellite Markers for Plants of the Species Triticum Aestivum and Tribe Triticeae and the Use of Said Markers

(iii) NUMBER OF SEQUENCES:

(iv) COMPUTER READABLE FORM:

- (A) MEDIUM TYPE: Floppy disk
- (B) COMPUTER: IBM PC compatible
- (C) OPERATING SYSTEM: PC-DOS/MS-DOS
- (D) SOFTWARE: PatentIn Release #1.0, Version #1.25 (EPO)

(v) CURRENT APPLICATION DATA:

APPLICATION NUMBER: US 08/983605

(vi) PRIOR APPLICATION DATA:

- (A) APPLICATION NUMBER: DE 195 25 284.5
- (B) FILING DATE: 28-JUN-1995

(2) INFORMATION FOR SEQ ID NO: 1:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1: (WMS052)

CTATGAGGCG GAGGTTGAAG

20

(2) INFORMATION FOR SEQ ID NO: 2:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 18 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2: (WMS052)

TGCGGTGCTC TTCCATTT

18

WMS055

5' GCA TCT GGT ACA CTA GCT GCC 3'

5' TCA TGG ATG CAT CAC ATC CT 3

CTimp

WMS057

5' TCG ATT CTG AAA GGT TCA TCG 3'

5' CGA TCA AGT AGT TGA AAG CGC 3'

AAAAAimp

WMS058

5' TCT GAT CCC GTG AGT GTA ACA 3'

5' GAA AAA AAT TGC ATA TGA GCC C 3'

CA

WMS060

5' TGT CCT ACA CGG ACC ACG T 3'

5' GCA TTG ACA GAT GCA CAC G 3'

CA

WMS063

5' TCG ACC TGA TCG CCC CTA 3'

5' CGC CCT GGG TGA TGA ATA GT 3'

GAA, CA, TA

WMS067

5' ACC ACA CAA ACA AGG TAA GCG 3'

5' CAA CCC TCT TAA TTT TGT TGG G 3'

CA

WMS068

5' AGG CCA GAA TCT GGG AAT G 3'

5' CTC CCT AGA TGG GAG AAG GG 3'

GA

WMS070

5' AGT GGC TGG GAG AGT GTC AT 3'

5' GCC CAT TAC CGA GGA CAC 3'

GT

WMS071

5' GGC AGA GCA GCG AGA CTC 3'

5' CAA GTG GAG CAT TAG GTA CAC G 3'

GT

WMS077

5' ACA AAG GTA AGC AGC ACC TG 3'

5' ACC CTC TTG CCC GTG TTG 3'

CA, GA

WMS082

5' ACG TTA GAA GGT GCA ATG GG 3'

5' AGT GGA TGC ACC GAC TTT G 3'

GT, GAimp

WMS088

5' CAC TAC AAC TAT GCG CTC GC 3'

5' TCC ATT GGC TTC TCT CTC AA 3'

GT

19/cont.

WMS095

5' GAT CAA ACA CAC ACC CCT CC 3'

5' AAT GCA AAG TGA AAA ACC CG 3'

CA

WMS099

5' AAG ATG GAC GTA TGC ATC ACA 3'

5' GCC ATA TTT GAT GAC GCA TA 3'

CA

WMS102

5' TCT CCC ATC CAA CGC CTC 3'

5' TGT TGG TGG CTT GAC TAT TG 3'

CT

WMS106

5' CTG TTC TTG CGT GGC ATT AA 3'

5' AAT AAG GAC ACA ATT GGG ATG G 3'

GA

WMS107

5' ATT AAT ACC TGA GGG AGG TGC 3'

5' GGT CTC AGG AGC AAG AAC AC 3'

CT

WMS108

5' CGA CAA TGG GGT CTT AGC AT 3'

5' TGC ACA CTT AAA TTA CAT COG C 3'

GTimp

WMS111

5' TCT GTA GGC TCT CTC CGA CTG 3'

5' ACC TGA TCA GAT CCC ACT CG 3'

CT,GT

WMS112

5' CTA AAC ACG ACA GCG GTG G 3'

5' GAT ATG TGA GCA GCG GTC AG 3'

CTimp

WMS113

5' ATT CGA GGT TAG GAG GAA GAG G 3'

5' GAG GGT CGG CCT ATA AGA CC 3'

GT

WMS114

5' ACA AAC AGA AAA TCA AAA CCC G 3'

5' ATC CAT CGC CAT TGG AGT G 3'

GA

WMS118

5' GAT GTT GGC ACT TGA GCA TG 3'

5' GAT TAG TCA AAT GGA ACA CCC C 3'

CA

WMS119

5' TGA CTA ACA TCC TTT GTC ACG C 3'

5' CAT GTC TCA ACC ACC CAC AG 3'

GTimp

WMS120

5' GAT CCA CCT TCC TCT CTC TC 3'
 5' GAT TAT ACT GGT GCC GAA AC 3'
 CT,CA

WMS121

5' TCC TCT ACA AAC AAA CAC AC 3'
 5' CTC GCA ACT AGA GGT GTA TG 3'
 CA

WMS122

5' GGG TGG GAG AAA GGA GAT G 3'
 5' AAA CCA TCC TCC ATC CTG G 3'
 CT,CA

WMS124

5' GCC ATG GCT ATC ACC CAG 3'
 5' ACT GTT CGG TGC AAT TTG AG 3'
 CT,GTimp

WMS126

5' CAC ACG CTC CAC CAT GAC 3'
 5' GTT GAG TTG ATG CGG GAG G 3'
 CA

WMS128

5' AGC ACA TTT TAA CAC AGA TA 3'
 5' ATC TGT GAA ATT TTG AAA AC 3'
 CA

WMS129

5' TCA GTG GGC AAG CTA CAC AG 3'
 5' AAA ACT TAG TAG CCG CGT 3'
 GTimp

WMS130

5' AGC TCT GCT TCA CGA GGA AG 3'
 5' CTC CTC TTT ATA TCG CGT CCC 3'
 GT

WMS131

5' AAT CCC CAC CGA TTC TTC TC 3'
 5' AGT TCG TGG GTC TCT GAT GG 3'
 CT

WMS132

5' TAC CAA ATC GAA ACA CAT CAG G 3'
 5' CAT ATC AAG GTC TCC TTC CCC 3'
 GA,GAA

@WMS133

5' ATC TAA ACA AGA CGG CGG TG 3'
 5' ATC TGT GAC AAC CGG TGA GA 3'
 CT

WMS134

5' CAT GGA ACT TAG ACA GAA TTG 3'

14/cont.

5' CAG TAC TTG GTA CTG AAC AGG 3'
CA

WMS135

5' TGT CAA CAT CGT TTT GAA AAG G 3'
5' ACA CTG TCA ACC TGG CAA TG 3'
GA

WMS136

5' GAC AGC ACC TTG CCC TTT G 3'
5' CAT CGG CAA CAT GCT CAT C 3'
CT

WMS140

5' ATG GAG ATA TTT GGC CTA CAA C 3'
5' CTT GAC TTC AAG GCG TGA CA 3'
CT

WMS144

5' TTT GCT GTG GTA CGA AAC ATA C 3'
5' ACT CAC AAA TGT CTA ATA AAA C 3'
GT

WMS146

5' CCA AAA AAA CTG CCT GCA TG 3'
5' CTC TGG CAT TGC TCC TTG G 3'
GAimp

WMS148

5' GTG AGG CAG CAA GAG AGA AA 3'
5' CAA AGC TTG ACT CAG ACC AAA 3'
CA

WMS149

5' CAT TGT TTT CTG CCT CTA GCC 3'
5' CTA GCA TCG AAC CTG AAC AAG 3'
GA

WMS153

5' GAT CTC GTC ACC CGG AAT TC 3'
5' TGG TAG AGA AGG ACG GAG AG 3'
GA

WMS154

5' TCA CAG AGA GAG AGG GAG GG 3'
5' ATG TGT ACA TGT TGC CTG CA 3'
GA

WMS155

5' CAA TCA TTT CCC CCT CCC 3'
5' AAT CAT TGG AAA TCC ATA TGC C 3'
CT

WMS156

5' CCA ACC GTG CTA TTA GTC ATT C 3'
5' CAA TGC AGG CCC TCC TAA C 3'
GT

WMS157

1 cont.

5' GTC GTC GCG GTA AGC TTG 3'
 5' GAG TGA ACA CAC GAG GCT TG 3'
 CT

WMS159

5' GGG CCA ACA CTG GAA CAC 3'
 5' GCA GAA GCT TGT TGG TAG GC 3'
 GT

WMS160

5' TTC AAT TCA GTC TTG GCT TGG 3'
 5' CTG CAG GAA AAA AAG TAC ACC C 3'
 GA

WMS161

5' GAT CGA GTG ATG GCA GAT GG 3'
 5' TGT GAA TTA CTT GGA CGT GG 3'
 CT

WMS162

5' AGT GGA TCG ACA AGG CTC TG 3'
 5' AGA AGA AGC AAA GCC TTC CC 3'
 CA

WMS163

5' ACC TCG ACA GAC CTG GTA CG 3'
 5' GTC TTT GTC ACC CGA TGG AC 3'
 CT

WMS164

5' ACA TTT CTC CCC CAT CGT C 3'
 5' TTG TAA ACA AAT CGC ATG CG 3'
 CT

WMS165

5' TGC AGT GGT CAG ATG TTT CC 3'
 5' CTT TTC TTT CAG ATT GCG CC 3'
 GA

WMS169

5' ACC ACT GCA GAG AAC ACA TAC G 3'
 5' GTG CTC TGC TCT AAG TGT GGG 3'
 GA

WMS174

5' GGG TTC CTA TCT GGT AAA TCC C 3'
 5' GAC ACA CAT GTT COT GCC AC 3'
 CT

WMS179

5' AAG TTG AGT TGA TGC GGG AG 3'
 5' CCA TGA CCA GCA TCC ACT C 3'
 GT

WMS180

5' ATC CGC CTA AGG AAT AGT GT 3'
 5' GAT CGC ACG GGA GAG AGA G 3'
 CT

14 cont.

WMS181

5' TCA TTG GTA ATG AGG AGA GA 3'
 5' GAA CCA TTC ATG TGC ATG TC 3'
 GA

WMS182

5' TGA TGT AGT GAG CCC ATA GGC 3'
 5' TTG CAC ACA GCC AAA TAA GG 3'
 CT

WMS186

5' GCA GAG CCT GGT TCA AAA AG 3'
 5' CGC CTC TAG CGA GAG CTA TG 5'
 GA

WMS189

5' AGG AGC AGC GGA ACG AAC 3'
 5' AGA AAT ACG GAA ACC CAC CC 3'
 CA

WMS190

5' GTG CTT GCT GAG CTA TGA GTC 3'
 5' GTG CCA CGT GGT ACC TTT G 3'
 CT,GT

WMS191

5' AGA CTG TTG TTT GCG GGC 3'
 5' TAG CAC GAC AGT TGT ATG CAT G 3'
 CT

WMS192

5' GGT TTT CTT TCA GAT TGC GC 3'
 5' CGT TGT CTA ATC TTG CCT TGC 3'
 CT

WMS193

5' CTT TGT GCA CCT CTC TCT CC 3'
 5' AAT TGT GTT GAT GAT TTG GGG 3'
 CT,CA

WMS194

5' GAT CTG CTC TAC TCT CCT CC 3'
 5' CGA CGC AGA ACT TAA ACA AG 3'
 CT

WMS195

5' AGG TGC CGT CGC GTC TAC 3'
 5' ACC CCC CAC GTC AGA GAG 3'
 CT

WMS197

5' GAG AAA GAG GTC TGG AGG TCG 3'
 5' CAA AAT GCA CAA GAA TGG AGG 3'
 CT

WMS198

5' TTG AAC CGG AAG GAG TAC AG 3'
 5' TCA GTT TAT TTT GGG CAT GTG 3'
 CA

A/cowt.

WMS200

5' TCA ACG GAA CAG ATG AGC G 3'
 5' GAC CTG ATG AGA GCA AGC AC 3'
 CT

WMS203

5' CCC AAA GCA GCG CAA GC 3'
 5' ACC AAT GCT ATC GGC TCG 3'
 CA,GA

WMS205

5' CGA CCC GGT TCA CTT CAG 3'
 5' AGT CGC CGT TGT ATA GTG CC 3'
 CT

WMS210

5' TGC ATC AAG AAT AGT GTG GAA G 3'
 5' TGA GAG GAA GGC TCA CAC CT 3'
 GA

WMS212

5' AAG CAA CAT TTG CTG CAA TG 3'
 5' TGC AGT TAA CTT GTT GAA AGG A 3'
 CT

WMS213

5' TGC CTG GCT CGT TCT ATC TC 3'
 5' CTA GCT TAG CAC TGT CGC CC 3'
 GA

WMS218

5' CGG CAA ACG GAT ATC GAC 3'
 5' AAC AGT AAC TCT CGC CAT AGC C 3'
 CT

WMS219

5' GAT GAG CGA CAC CTA GGC TC 3'
 5' GGG GTC CGA GTC CAC AAC 3'
 GAimp

WMS224

5' TGA GTC CAG CAC TGC TGC 3'
 5' CAA CAT CCG CTC GTA TTC AA 3'
 CT

WMS228

5' TCA TAT GCA CCT CTT TCC TAG G 3'
 5' GTG TGC CAC CTT TGA CGT C 3'
 CT,CA

WMS231

5' AGC TCG GGA TGA AGC GTG 3'
 5' GAT CCG CCG CTG CGT TT 3'
 GAimp

WMS232

5' ATC TCA ACG GCA AGC CG 3'
 5' CTG ATG CAA GCA ATC CAC C 3'

1 cont.

GA

WMS233

5' TCA AAA CAT AAA TGT TCA TTG GA 3'

5' TCA ACC GTG TGT AAT TTT GTC C 3'

CT

WMS234

5' GAG TCC TGA TGT GAA GCT GTT G 3'

5' CTC ATT GGG GTG TGT ACG TG 3'

CT,CA

WMS237

5' GAA TCA CTT GTG AAG CAT CTG G 3'

5' CTG GAT GCA TCA CAT CCA AC 3'

CT

WMS238

5' TCG CTT CTA CCG CTC ACC 3'

5' AGT GCC TTG CCG AGG TC 3'

CT,GT,GGGT

WMS241

5' TCT TCC AAC TAA AGC ATA GC 3'

5' CTT CCA TGG ACT ACA TAC TAG C 3'

GA

WMS242

5' TCC AAG GCA GTA GGC AGG 3'

5' TGT TGT TGG CCT GTA TGC AT 3'

GA

WMS244

5' GGC AGC TGA GGC AAT CTG 3'

5' TTT GGA CAT TTC CCA GCG 3'

CAimp

WMS245

5' CAG CGC AGT TAG CTC GC 3'

5' ATC TGT CCA TTC GAG CGC 3'

CT

WMS247

5' GCA ATC TTT TTT CTG ACC ACG 3'

5' ATG TGC ATG TCG GAC GC 3'

GA

WMS248

5' AGG ACT TCC GCA CCC TG 3'

5' TGG CGT GGT CTA AAT GGA C 3'

CA

WMS249

5' CAA ATG GAT CGA GAA AGG GA 3'

5' CTG CCA TTT TTC TGG ATC TAC C 3'

GAimp

WMS251

5' CAA CTG GTT GCT ACA CAA GCA 3'

1 cont.

5' GGG ATG TCT GTT CCA TCT TAG 3'
CA

WMS255

5' CAA CTG TAC GTA GGT TTC ATT GC 3'
5' TCT GCC GTA AGT CGC CTC 3'
GA

WMS257

5' AGA GTG CAT GGT GGG ACG 3'
5' CCA AGA CGA TGC TGA AGT CA 3'
GT

WMS258

5' GAT CGC TTC ATC TCT CTC TCT C 3'
5' GTA CAC GCC GTA GGC CC 3'
CT

WMS259

5' AGG GAA AAG ACA TCT TTT TTT TC 3'
5' CGA CCG ACT TCG GGT TC 3'
GA

WMS260

5' GCC CCC TTG CAC AAA TC 3'
5' CGC AGC TAC AGG AGG CC3'
GA

WMS261

5' CTC CCT GTA CGC CTA AGG C 3'
5' CTC GCG CTA CTA GCC ATT G 3'
CT

WMS263

5' TCT GCC GTA AGT CGC CTC 3'
5' GGT TTC ATT GCT TGC COT AA 3'
CT

WMS264

5' GAG AAA CAT GCC GAA CAA CA 3'
5' GCA TGC ATG AGA ATA GGA ACT G 3'
CA

WMS265

5' TGT TGC GGA TGG TCA CTA TT 3'
5' GAG TAC ACA TTT GGC CTC TGC 3'
GT

WMS268

5' AGG GGA TAT GTT GTC ACT CCA 3'
5' TTA TGT GAT TGC GTA CGT ACC C 3'
GAimp

WMS269

5' TGC ATA TAA ACA GTC ACA CAC CC 3'
5' TTT GAG CTC CAA AGT GAG TTA GC 3'
CA

WMS271

1 cont.

5' CAA GAT CGT GGA GCC AGC 3'
 5' AGC TGC TAG CTT TTG GGA CA 3'
 CT,GA

WMS272

5' TGC TCT TTG GCG AAT ATA TGG 3'
 5' GTT CAA AAC AAA TTA AAA GGC CC3'
 CA

WMS273

5' ATT GGA CGG ACA GAT GCT TT 3'
 5' AGC AGT GAG GAA GGG GAT C 3'
 GA

WMS274

5' AAC TTG CAA AAC TGT TCT GA 3'
 5' TAT TTG AAG CGG TTT GAT TT 3'
 GT

WMS275

5' AAT TTT CTT CCT CAC TTA TTC T 3'
 5' AAC AAA AAA TTA GGG CC 3'
 CT

WMS276

5' ATT TGC CTG AAG AAA ATA TT 3'
 5' AAT TTC ACT GCA TAC ACA AG 3'
 CT

WMS278

5' GTT GCT TCA TGA ACG CTC AA 3'
 5' CTG CCC AAT TTT CTC CAC TC 3'
 GTimpGAimp

WMS281

5' CGG CCA TAT TTC TGT AAG TAT GC 3'
 5' GCA GGT AAT GGC CGG AC 3'
 GT

WMS282

5' TTG GCC GTG TAA GGC AG 3'
 5' TCT CAT TCA CAC ACA ACA CTA GC 3'
 GA

WMS284

5' AAT GAA AAA ACA CTT GCG TGG 3'
 5' GCA CAT TTT TCA CTT TCG GG 3'
 GA

WMS285

5' ATG ACC CTT CTG CCA AAC AC 3'
 5' ATC GAC CGG GAT CTA GCC 3'
 GA

WMS291

5' CAT CCC TAC GCC ACT CTG C 3'
 5' AAT GGT ATC TAT TCC GAC CCG 3'
 CA

4/cont.

WMS292

5' TCA CCG TGG TCA CCG AC 3'
 5' CCA CCG AGC CGA TAA TGT AC 3'
 CT

WMS293

5' TAC TGG TTC ACA TTG GTG CG 3'
 5' TCG CCA TCA CTC GTT CAA G 3'
 CA

WMS294

5' GGA TTG GAG TTA AGA GAG AAC CG 3'
 5' GCA GAG TGA TCA ATG CCA GA 3'
 GAimp

WMS295

5' GTG AAG CAG ACC CAC AAC AC 3'
 5' GAC GGC TGC GAC GTA GAG 3'
 GA

WMS296

5' AAT TCA ACC TAC CAA TCT CTG 3'
 5' GCC TAA TAA ACT GAA AAC GAG 3'
 CT

WMS297

5' ATC GTC ACG TAT TTT GCA ATG 3'
 5' TGC GTA AGT CTA GCA TTT TCT G 3'
 GT, GA

WMS299

5' ACT ACT TAG GCC TCC CGC C 3'
 5' TGA CCC ACT TGC AAT TCA TC 3'
 GA, TAG

WMS301

5' GAG GAG TAA GAC ACA TGC CC 3'
 5' GTG GCT GGA GAT TCA GGT TC 3'
 GA, G

WMS302

5' GCA AGA AGC AAC AGC AGT AAC 3'
 5' CAG ATG CTC TTC TCT GCT GG 3'
 GA

WMS304

5' AGG AAA CAG AAA TAT CGC GG 3'
 5' AGG ACT GTG GGG AAT GAA TG 3'
 CT

WMS311

5' TCA CGT GGA AGA CGC TCC 3'
 5' CTA CGT GCA CCA CCA TTT TG 3'
 GA

WMS312

5' ATC GCA TGA TGC ACG TAG AG 3'
 5' ACA TGC ATG CCT ACC TAA TGG 3'
 GA

14 CONT.

WMS313

5' CCG CCC TCA TTA AGT TTC AC 3'
 5' TTT GAC AAG TAC ACG AGT CTG C 3'
 CT,GT

WMS314

5' AGG AGC TCC TCT GTG CCA C 3'
 5' TTC GGG ACT CTC TTC CCT G 3'
 CT

WMS316

5' CAT GGA CAT TTT ACC ACA AGA C 3'
 5' TGC GTG TGG TCC ACC TC 3'
 AT,GT

WMS319

5' GGT TGC TGT ACA AGT GTT CAC G 3'
 5' CGG GTG CTG TGT GTA ATG AC 3'
 CT

WMS320

5' CGA GAT ACT ATG GAA GGT GAG G 3'
 5' ATC TTT GCA AGG ATT GCC C 3'
 GT,GA

WMS321

5' CAA TGT GGA GAC GGT GTG C 3'
 5' TGT TGC ATG CGA TCA TGC 3'
 GT,GAimp

WMS322

5' TCA CAA AAT GAT TTC TCA TCC G 3'
 5' TGC AGA AAA CCA ACA AGG G 3'
 GA

WMS325

5' TTT CTT CTG TCG TTC TCT TCC C 3'
 5' TTT TTA CGC GTC AAC GAC G 3'
 CT

WMS328

5' GCA ATC CAC GAG AAG AGA GG 3'
 5' CAC AAA CTC TTG ACA TGT GCG 3'
 GT

WMS330

5' TTG CTA TCC ATG TGC CAG AG 3'
 5' ACA TGT TTC ATG CAG GTA GCC 3'
 GTT

WMS332

5' AGC CAG CAA GTC ACC AAA AC 3'
 5' AGT GCT GGA AAG AGT AGT GAA GC 3'
 GA

WMS333

5' GCC CGG TCA TGT AAA ACG 3'
 5' TTT CAG TTT GCG TTA AGC TTT G 3'

14 / cont.

GA

WMS334

5' AAT TTC AAA AAG GAG AGA GA 3'

5' AAC ATG TGT TTT TAG CTA TC 3'

GA

WMS335

5' CGT ACT CCA CTC CAC ACG G 3'

5' CGG TCC AAG TGC TAC CTT TC 3'

GA, GCGT

WMS336

5' CCC TTT AAT CTC GCT CCC TC 3'

5' GTC TCT TTC TCG TAC TTC CAG G 3'

CT

WMS337

5' CCT CTT CCT CCC TCA CTT AGC 3'

5' TGC TAA CTG GCC TTT GCC 3'

CT, CACT, CA

WMS339

5' AAT TTT CTT CCT CAC TTA TT 3'

5' AAA CGA ACA ACC ACT CAA TC 3'

CT

WMS340

5' GCA ATC TTT TTT CTG ACC ACG 3'

5' ACG AGG CAA GAA CAC ACA TG 3'

GA

WMS341

5' TTC AGT GGT AGC GGT CGA G 3'

5' CCG ACA TCT CAT GGA TCC AC 3'

CT

WMS342

5' TAT CCA GAG CAG ACG GAC G 3'

5' GGT CTA GCT TCG ACG ACA CC 3'

GT

WMS344

5' CAA GGA AAT AGG CGG TAA CT 3'

5' ATT TGA GTC TGA AGT TTG CA 3'

GT

WMS346

5' CAA GCA AGG TTT CGT TTT ATC C 3'

5' GCA TGT GGT CCA TGT ACT GC 3'

AT, GT

WMS349

5' GGC TTC CAG AAA ACA ACA GG 3'

5' ATC GGT GCG TAC CAT CCT AC 3'

GA

WMS350

5' ACC TCA TCC ACA TGT TCT ACG 3'

A cont.

5' GCA TGG ATA GGA CGC CC 3'
GT

WMS353

5' CCA TGT TGA GTA GGT TCA GCC 3'
5' CTT GGC CAG AAG CTA CGA AC 3'
GCGT,GT

WMS356

5' AGC GTT CTT GGG AAT TAG AGA 3'
5' CCA ATC AGC CTG CAA CAA C 3'
GA

WMS357

5' TAT GGT CAA AGT TGG ACC TCG 3'
5' AGG CTG CAG CTC TTC TTC AG 3'
GA

WMS358

5' AAA CAG CGG ATT TCA TCG AG 3'
5' TCC GCT GTT GTT CTG ATC TC 3'
GAimp

WMS359

5' CTA ATT GCA ACA GGT CAT GGG 3'
5' TAC TTG TGT TCT GGG ACA ATG G 3'
CT,CTimp

WMS361

5' GTA ACT TGT TGC CAA AGG GG 3'
5' ACA AAG TGG CAA AAG GAG ACA 3'
GAimp

WMS368

5' CCA TTT CAC CTA ATG CCT GC 3'
5' AAT AAA ACC ATG AGC TCA CTT GC 3'
AT

WMS369

5' CTG CAG GCC ATG ATG ATG 3'
5' ACC GTG GGT GTT GTG AGC 3'
CTimp

WMS371

5' GAC CAA GAT ATT CAA ACT GGC C 3'
5' AGC TCA GCT TGC TTG GTA CC 3'
CA, GA

WMS372

5' AAT AGA GCC CTG GGA CTG GG 3'
5' GAA GGA CGA CAT TCC ACC TG 3'
GA

WMS374

5' ATA GTG TGT TGC ATG CTG TGT G 3'
5' TCT AAT TAG CGT TGG CTG CC 3'
GT

WMS375

A cont.

5' ATT GGC GAC TCT AGC ATA TAC G 3'
 5' GGG ATG TCT GTT CCA TCT TAG C 3'
 CA

WMS376

5' GGG CTA GAA AAC AGG AAG GC 3'
 5' TCT CCC GGA GGG TAG GAG 3'
 CA, GAimp

WMS382

5' GTC AGA TAA CGC CGT CCA AT 3'
 5' CTA CGT GCA CCA CCA TTT TG 3'
 GA

WMS383

5' ACG CCA GTT GAT CCG TAA AC 3'
 5' GAC ATC AAT AAC CGT GGA TGG 3'
 GT

WMS384

5' TTT TCA TTG TGC CCT CTA CT 3'
 5' GCC AAG TTT CTT AGC TAG TTA A 3'
 GTimp

WMS388

5' CTA CAA TTC GAA GGA GAG GGG 3'
 5' CAC CGC GTC AAC TAC TTA AGC 3'
 CT, CA, CA

WMS389

5' ATC ATG TCG ATC TCC TTG ACG 3'
 5' TGC CAT GCA CAT TAG CAG AT 3'
 CT, GT

WMS390

5' AAG TTT CAC ACA AGA TCT CTC C 3'
 5' TGA CAA GTA CAC GAG TCT GC 3'
 CT, GT

WMS391

5' ATA GCG AAG TCT CCC TAC TCC A 3'
 5' ATG TGC ATG TCG GAC GC 3'
 CA, GA

WMS393

5' TCA TCT GCT ATT TGT GCT ACA 3'
 5' TCA AAT ACA CCA ATG TGC C 3'
 CA

WMS395

5' TAC AAC CGC AAG TAA TGC CA 3'
 5' TAC CAA CAC CCT AGC CCT TG 3'
 CA

WMS397

5' TGT CAT GGA TTA TTT GGT CGG 3'
 5' CTG CAC TCT CGG TAT ACC AGC 3'
 CT

A'cont

WMS400

5' GTG CTG CCA CCA CTT GC 3'
 5' TGT AGG CAC TGC TTG GGA G 3'
 CA

@WMS403

5' CGA CAT TGG CTT CGG TG 3'
 5' ATA AAA CAG TGC GGT CCA GG 3'
 CA

WMS408

5' TCG ATT TAT TTG GGC CAC TG 3'
 5' GTA TAA TTC GTT CAC AGC ACG C 3'
 CA

WMS410

5' GCT TGA GAC CGG CAC AGT 3'
 5' CGA GAC CTT GAG GGT CTA GA 3'
 CA

WMS411

5' CCC ATA CGA TGA TGT GTT TCC 3'
 5' CAA ACG GAA CAT GGT CCC 3'
 CT

WMS412

5' ATC AAC AAG GTT TGT GTG TTG G 3'
 5' ATG AAA CGC GAC CTC CC 3'
 GA

WMS413

5' TGC TTG TCT AGA TTG CTT GGG 3'
 5' GAT CGT CTC GTC CTT GGC A 3'
 GA

WMS415

5' GAT CTC CCA TGT CCG CC 3'
 5' CGA CAG TCG TCA CTT GCC TA 3'
 GAimp

WMS425

5' GAG CCC ACA AGC TCG CA 3'
 5' TCG TTC TCC CAA GGC TTG 3'
 CT

WMS427

5' AAA CTT AGA ACT GTA ATT TCA GA 3'
 5' AGT GTG TTC ATT TGA CAG TT 3'
 CA

WMS428

5' CGA GGC AGC GAG GAT TT 3'
 5' TTC TCC ACT AGC CCC GC 3'
 GA

WMS429

5' TTG TAC ATT AAG TTC CCA TTA 3'
 5' TTT AAG GAC CTA CAT GAC AC 3'
 CT

A CONT.

WMS434

5' ATG AGT TCC GCC AAA GAA TG 3'
 5' ACG AAA TAC ACA AGT GGG ACA 3'
 GT

WMS437

5' GAT CAA GAC TTT TGT ATC TCT C 3'
 5' GAT GTC CAA CAG TTA GCT TA 3'
 CT

WMS440

5' CCT ATG GTC TCC ATC ATG AGG 3'
 5' TCA TGT CAA CTC AAG AAC ACG 3'
 CT

WMS443

5' GGG TCT TCA TCC GGA ACT CT 3'
 5' CCA TGA TTT ATA AAT TCC ACC 3'
 CA,GA

WMS445

5' TTT GTT GGG GGT TAG GAT TAG 3'
 5' CCT TAA CAC TTG CTG GTA GTG A 3'
 CT

WMS448

5' AAA CCA TAT TGG GAG GAA AGG 3'
 5' CAC ATG GCA TCA CAT TTG TG 3'
 GA

WMS455

5' ATT CGG TTC GCT AGC TAC CA 3'
 5' ACG GAG AGC AAC CTG CC 3'
 GTimp

WMS456

5' TCT GAA CAT TAC ACA ACC CTG A 3'
 5' TGC TCT CTC TGA ACC TGA AGC 3'
 GA

WMS458

5' AAT GGC AAT TGG AAG ACA TAG C 3'
 5' TTC GCA ATG TTG ATT TGG C 3'
 CA

WMS459

5' ATG GAG TGG TCA CAC TTT GAA 3'
 5' AGC TTC TCT GAC CAA CTT CTC G 3'
 GA

WMS469

5' CAA CTC AGT GCT CAC ACA ACG 3'
 5' CGA TAA CCA CTC ATC CAC ACC 3'
 CT

WMS471

5' CGG CCC TAT CAT GGC TG 3'
 5' GCT TGC AAG TTC CAT TTT GC 3'

4 cont.

CA

WMS473

5' TCA TAC GGG TAT GGT TGG AC 3'

5' CAC CCC CTT GTT GGT CAC 3'

GTimp

WMS476

5' ATG GGT TCG TAC TAA CAT CAG C 3'

5' TTG CTG GTA GCT TCA ATC CC 3'

GAimp

WMS480

5' TGC TGC TAC TTG TAC AGA GGA C 3'

5' CCG AAT TGT CCG CCA TAG 3'

CT, CA

WMS484

5' ACA TCG CTC TTC ACA AAC CC3'

5' AGT TCC GGT CAT GGC TAG G 3'

CT

WMS494

5' ATT GAA CAG GAA GAC ATC AGG G 3'

5' TTC CTG GAG CTG TCT GGC 3'

CA

WMS495

5' GAG AGC CTC GCG AAA TAT AGG 3'

5' TGC TTC TGG TGT TCC TTC G 3'

GA

WMS497

5' GTA GTG AAG ACA AGG GCA TT 3'

5' CCG AAA GTT GGG TGA TAT AC 3'

GTimp

WMS499

5' ACT TGT ATG CTC CAT TGA TTG G 3'

5' GGG GAG TGG AAA OTG CAT AA 3'

GA

WMS501

5' GGC TAT CTC TGG CGC TAA AA 3'

5' TCC ACA AAC AAG TAG CGC C 3'

CA

WMS512

5' AGC CAC CAT CAG CAA AAA TT 3'

5' GAA CAT GAG CAG TTT GGC AC 3'

GT

@WMS513

5' ATC CGT AGC ACC TAC TGG TCA 3'

5' GGT CTG TTC ATG CCA CAT TG 3'

CA

WMS515

5' AAC ACA ATG GCA AAT GCA GA 3'

H 1 cont.

5' CCT TCC TAG TAA GTG TGC CTC A 3'
GTimp

WMS518

5' AAT CAC AAC AAG GCG TGA CA 3'
5' CAG GGT GGT GCA TGC AT 3'
CA

WMS530

5' AAA TAG GAC AAC CCA CGG C 3'
5' TCA ACT TCT TGG CCT CCA TC 3'
CT

WMS532

5' ACT GCG TGT GCC TAC AAT TG 3'
5' TCA CTC GCA CTC GAT AGG C 3'
GT

WMS533

5' AAG GCG AAT CAA ACG GAA TA 3'
5' GTT GCT TTA GGG GAA AAG CC 3'
CT, CA

WMS537

5' ACA TAA TGC TTC CTG TGC ACC 3'
5' GCC ACT TTT GTG TCG TTC CT 3'
CA, TA

WMS538

5' GCA TTT CGG GTG AAC CC 3'
5' GTT GCA TGT ATA CGT TAA GCG G 3'
GTimp

WMS540

5' TCT CGC TGT GAA ATC CTA TTT C 3'
5' AGG CAT GGA TAG AGG GGC 3'
CTimp

WMS544

5' TAG AAT TCT TTA TGG GGT CTG C 3'
5' AGG ATT CCA ATC CTT CAA AAT T 3'
CT, ATCT, CT

WMS550

5' CCC ACA AGA ACC TTT GAA GA 3'
5' CAT TGT GTG TGC AAG GCA C 3'
CT, GT

WMS554

5' TGC CCA CAA CGG AAC TTG 3'
5' GCA ACC ACC AAG CAC AAA GT 3'
CT, GTimp

WMS565

5' GCG TCA GAT ATG CCT ACC TAG G 3'
5' AGT GAG TTA GCC CTG AGC CA 3'
CA

WMS566

A cont.

5' TCT GTC TAC CCA TGG GAT TTG 3'
5' CTG GCT TCG AGG TAA GCA AC 3'
CA, TA

WMS569

5' GGA AAC TTA TTG ATT GAA AT 3'
5' TCA ATT TTG ACA GAA GAA TT 3'
GT

WMS570

5' TCG CCT TTT ACA GTC GGC 3'
5' ATG GGT AGC TGA GAG CCA AA 3'
CT, GT

WMS573

5' AAG AGA TAA CAT GCA AGA AA 3'
5' TTC AAA TAT GTG GGA ACT AC 3'
CA

WMS577

5' ATG GCA TAA TTT GGT GAA ATT G 3'
5' TGT TTC AAG CCC AAC TTC TAT T 3'
CA, TA

WMS582

5' AAG CAC TAC GAA AAT ATG AC 3'
5' TCT TAA GGG GTG TTA TCA TA 3'
CA

WMS583

5' TTC ACA CCC AAC CAA TAG CA 3'
5' TCT AGG CAG ACA CAT GCC TG 3'
CA

WMS588

5' GAT CCC CAA TTG CAT GTT G 3'
5' CTT GCA ACT GGG GGA CAC 3'
GT

1' concu